

IN THE CLAIMS:

Please amend the claims as follows:

1-44. (Cancelled)

45. (Currently Amended) A medical system to analyze brain waves of a subject comprising:

- (a) an active EEG (electroencephalograph) electrode detecting a subject's brain waves;
- (b) a stimulus generator means providing to the subject concurrent sense stimuli in a plurality of stimulus modes, the stimuli in a first one of the modes being at a frequency F_1 and the stimuli in a second one of the modes being at a frequency F_2 ;
- (c) an amplifier amplifying and digitizing the detected brain waves;
- (d) a processor ratio means receiving the digitized brain waves from (c) and producing subject brain wave F ratio data as a function of a power of brain responses at each of F_1 and F_2 in the presence and absence of stimulation;
- (e) ~~a receiver including a computer~~ comparing ~~which compares~~ the subject brain wave F ratio data from (d) with one of brain wave F ratio data generated as a function of one of ~~data from~~ (i) data from a control ~~a normal~~ group of patients and (ii) data generated by the subject in the presence and absence of stimulation;
- (f) ~~an output coupled to the computer~~ a warning means ~~situated in the receiver and producing a warning~~ when the comparison of (e) indicates one of injury to and dysfunction of one of the subject's spinal cord, brain stem and brain; and
- (g) a modulator ~~modulating means~~ modulating a carrier wave and the amplified brain waves, ~~the modulating means generating to generate~~ an audio signal therefrom.

46. (Currently Amended) The medical system according to claim 45, wherein a statistical evaluation of computed measures from a subject is determined by computing a Z-score, where Z

= (M-P)/6, wherein M is a mean value of a normative distribution, P is a current measure from the subject and 6 is a standard deviation of a control ~~normal~~ age- matched population.

47. (Previously Presented) The medical system according to claim 45, further comprising:
a radio broadcast transmitter; and
a headband situating thereon the electrode, the amplifier and the radio broadcast transmitter.
48. (Currently Amended) A medical system to analyze brain waves of a subject, comprising:
- (a) an active EEG (electroencephalograph) electrode detecting a subject's analog brain waves;
 - (b) connection means removably connecting the electrode to a subject's head;
 - (c) an amplifier situated on the connection means, the amplifier amplifying the detected brain waves;
 - (d) a radio transmitter ~~radio-broadcast means~~ situated on the connection means, the radio ~~transmitter broadcast means~~ generating a brain wave broadcast signal by ~~modulating a carrier signal~~ based on the detected analog brain waves, the radio ~~transmitter broadcast means~~ broadcasting the brain wave broadcast signal;
 - (e) a receiver receiving and amplifying the ~~broadcast~~ brain wave broadcast signal; and
 - (f) sound generator ~~generating means~~ coupled to the radio receiver, the sound ~~generator generating means~~ ~~demodulating the amplified broadcast brain wave signals and converting the brain wave broadcast signal into demodulated brain waves into tone-like sounds, corresponding to the analog brain waves.~~
49. (Previously Presented) The medical system according to claim 48, wherein the connection means includes a headband.

50. (Currently Amended) The medical system according to claim 48, wherein the radio receiver ~~means~~ includes a filter which separates a frequency band from a group of frequency bands of the broadcast brain wave broadcast signal[[s]].

51. (Previously Presented) The medical system according to claim 50, wherein the group of frequency bands includes delta, theta, alpha and beta bands.

52. (Currently Amended) A medical system for analyzing brain waves of a subject at a location remote from the subject, the system to analyze brain waves of a subject, comprising:

- (a) an EEG (electroencephalograph) electrode for detecting a subject's brain waves of the subject;
- (b) attachment means coupled to the electrode and removably attaching the electrode to a subject's head of the subject;
- (c) an amplifier connected to the electrode for amplifying the detected brain waves;
- (d) a radio transmitter situated on the attachment means and broadcasting a signal based on the subject's amplified brain waves after amplification;
- (e) a remote radio receiver receiving the broadcast brain wave[[s]] signal; and
- (f) an output device generating an output signal based on the broadcast brain wave[[s]] signal for analysis by an operator to determine the existence of brain dysfunction.

53. (Currently Amended) The medical system according to claim 52, further comprising a processor analyzing the brain wave signal to determine the existence of brain injury, wherein the output device generates a warning means warning when the output signal analysis of the brain wave signal indicates brain dysfunction injury, wherein the warning means includes one of a plurality of lights and an audio device.

54. (Previously Presented) The medical system according to claim 52, wherein the attachment means includes a patch and the electrode includes an active electrode, a reference and a ground.

55. (Currently Amended) The medical system according to claim 52, wherein the transmitter means includes one of a radio transmitter and a cellular telephone.

56. (Cancelled)

57. (Cancelled)

58. (Cancelled)

59. (Currently Amended) The medical system according to claim 52, further comprising wherein the an output device produces the producing an audible output signal based on the brain wave signal using producing means producing an audio output from a broadcast carrier modulated based on the brain waves.

60. (Cancelled)

61. (Cancelled)

62. (Cancelled)

63. (Cancelled)

64. (Cancelled)

65. (Previously Presented) The medical system according to claim 52, wherein the attachment means includes a headband.
66. (Previously Presented) The medical system according to claim 52, comprising:
at least three electrodes;
three amplifiers; and
reference and ground electrodes.
67. (Cancelled)
68. (Currently Amended) A medical method to analyze brain waves of a subject, comprising the steps of:
- (a) removably connecting an active EEG (electroencephalograph) electrode to a head of the subject;
 - (b) detecting the subject's analog brain waves;
 - (c) amplifying the detected brain waves using an amplifier situated on a device connecting the EEG electrode to a head of the subject ~~the connection means~~;
 - (d) ~~broadcasting~~ generating a brain wave broadcast signal, generated based on the detected analog brain waves, using a transmitter ~~radio-broadcast means~~ situated on the device connecting the EEG to the subject's head ~~connection means by modulating a carrier signal based on the detected analog brain waves~~;
 - (~~e~~) ~~broadcasting the brain wave signal~~;
 - (~~f~~)(e) receiving and amplifying the broadcast brain wave broadcast signal using a hand-held radio receiver; and
 - (~~g~~)(f) generating sounds based on the brain wave signals using the hand-held receiver by demodulating the amplified broadcast brain wave broadcast signal[[s]].